

ABSTRACT OF THE DISCLOSURE

5 Information that must remain secure is often stored on untrusted storage devices. To increase security, this information is encrypted by an encryption value prior to storing on the untrusted storage device. The encryption value itself is then encrypted. The encryption value is decrypted by correctly solving an access formula describing a function of groups. Each group includes a list of at least one consumer client. A requesting consumer client is granted access to the information if the requesting consumer client is a member of at least one group which correctly solves the access formula.